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Esters of β-ketophosphonic acids - Communication 9. Reaction of 2,6-dibromo- and 2,6-dichlorocyclohexanone with one and two moles of triethyl phosphite

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Abstract

1. The reaction of trans-2,6-dibromocyclohexanone with one and two molecules of triethyl phosphite follows a complex course. The reaction with one molecule of triethyl phosphite stops at the stage of formation of the diethyl bromo-6-cyclohexen-1-yl ester of phosphoric acid, which is further converted to diethyl cyclohexadien-1,3-yl-2 phosphate and diethyl phenyl phosphate. The diethyl phosphoric ester of the enol form of the ester of cyclohexanone-2-phosphonic-1 acid is not produced in this process. 2. The cis- and trans-isomers of 2,6-dichlorocyclohexanone reacr with two molecules of triethyl phosphite with the formation of diethyl chloro-6-cyclohexen-1-yl ester of phosphoric acid. 3. The bromination of the diethyl cyclohexenyl ester of phosphoric acid with bromosuccinimide with subsequent treatment with triethyl phosphite does not lead to the diethylphosphoric ester of the enol form of cyclohexan-one-2-phosphonic-1 acid. A mixture of products is formed similar to the mixture obtained when triethyl phosphite acts on cis-2,--dibromocyclohexanone.

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